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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,265	11/02/2001	Art Shelest	M1103.70084US00	2501
45840 7590 11/16/2007 WOLF GREENFIELD (Microsoft Corporation) C/O WOLF, GREENFIELD & SACKS, P.C. 600 ATLANTIC AVENUE BOSTON, MA 02210-2206			EXAMINER DENNISON, JERRY B	
			ART UNIT 2143	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/002,265

Applicant(s)

SHELEST ET AL.

Examiner

J Bret Dennison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-9 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-9 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to the Election for Application Number 10/002,265 received on 1/31/2007.
2. Claims 5-9 and 14-18 are presented for examination.

Claim Objections

3. Claims 5 and 14 are objected to because of the following informalities:
4. Claims 5 and 14 include the limitation, "the normal range of values." Examiner suggests amending this limitation to "a normal range of values" to avoid possible antecedent basis issues.
5. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5-9 and 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. The term "normal" in claims 5 and 14 is a relative term, which renders the claim indefinite. The term "normal" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.
8. Claims 5 and 14 recite a "normal range of values" and predicting if an option will need a value outside this "normal range of values." Since the specification does not

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provide a standard for what is considered to be "normal", the range of values is rendered indefinite, making it impossible to determine if a value is outside this "normal range".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 14-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

10. Applicant's specification states:

*"[0020] Computer 110 typically includes a variety of computer readable media. Computer readable media can be any available media that can be accessed by computer 110 and includes both volatile and nonvolatile media, removable and non-removable media. By way of example, and not limitation, **computer readable media may comprise computer storage media and communication media**. Computer storage media includes both volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer readable instructions, data structures, program modules or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by computer 110. **Communication media** typically embodies computer readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media. Combinations of*

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the any of the above should also be included within the scope of computer readable media."

11. Applicant has provided intrinsic evidence in the specification that the phrase "computer-readable medium" as used in the claims is intended to cover media which would have been recognized by one of ordinary skill at the time of the invention as communication media as described in Applicant's specification.

12. Applicant's inclusion of communication media would have been reasonably interpreted by one of ordinary skill as a form of energy rather than a process, machine, manufacture or composition of matter.

13. See ANNEX IV "Computer-Related Nonstatutory Subject Matter", section (c) "Electro-Magnetic Signals" of the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", released 22 November 2005 in the Official Gazette ("Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101...These interim guidelines propose that such signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.")

14. Therefore, claims 14-18 are not limited to embodiments which would enable the program to act as a computer component and realize its functionality to provide a practical application with a useful, concrete and tangible result.

15. As such, claims 14-18 are not directed to statutory subject matter and are therefore non-statutory.

Claim Interpretation

Before a detailed rejection, a brief discussion should be made about the limitations of the independent claims to clarify Examiner's interpretations.

Claims 5 and 14 recite, If an option is predicted to be needed, set a computer setting, the computer setting being set to either a value within a normal range of values, or a value outside a normal range of values, and if the option is not needed, use a default value for the computer setting. The claims also describe examples of values that are outside the normal range.

"Normal Range"

As explained above, Applicant's specification does not define a "normal range" or how to determine what a normal range is. With consideration to the rest of the claim limitations, it appears that a "normal range" corresponds to "values that a majority of applications use." However, this still does not provide enough explanation as to how to determine if a value is within the normal range or not, since "normal" is a relative term.

For examination purposes, Examiner provides the following reasonable interpretation, based from facts that are well known in the art, as follows.

As defined by Dictionary.com, the definition of a "range" includes:

"Mathematics. the set of all values attained by a given function throughout its domain."

Therefore a range is simply a set of values. A "set" is well known to include zero or more values (i.e. an empty set, or {3,5,6}). As such, a range could simply include zero or more values, and therefore, a normal range could include zero or more values.

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However, with consideration to the claims, since a value is being set, it appears that the "normal range" as claimed would require at least one value.

Therefore, with consideration to the rest of the claim limitations, a reasonable interpretation of a "normal range" is simply a value that applications use, such as a default value.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

16. Claims 5 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Abassi et al. (U.S. 6,925,502).

17. Before a detailed mapping, a discussion of the prior art is provided to clarify Examiner's interpretations.

Abassi disclosed a method and system for a receiver to determine that a TCP segment size (window size) should be altered, based on previous data transfer (col. 1, lines 60-67). Abassi disclosed that the data source transmits data according to a protocol having a predetermined segment size (col. 2, lines 52-55) and the receiver

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receives this data at the predetermined segment size (col. 3, lines 22-26) and then the receiver makes a determination as to whether this segment size should be increased (col. 5, lines 35-45), decreased (col. 5, lines 56-57), or stay the same (col. 5, lines 52-55). The receiver makes this optimization based on previous data transfers from the transmitter (col. 5, lines 20-30). Abbassi disclosed that the "TCP protocol does not recognize TCP segment sizes smaller than 8,129 bits or greater than 65,536 bits. Abbassi further disclosed using this complete range in regards to the teachings (col. 6, lines 5-11). Abbassi further disclosed that since window size limits are merely a design choice, any limitations regarding window size can be changed or eliminated (col. 6, lines 10-15). Since Abbassi disclosed using the entire range of TCP window sizes possible, Abbassi must disclose a "normal range" as claimed, as well as values outside the normal range.

18. Regarding claims 5 and 14, Abbassi disclosed a method (col. 1, lines 49-50) and computer readable medium (col. 1, lines 49-50) to negotiate an option for a computer setting in a computer environment (col. 1, lines 53-55, establishing a communication and negotiating a window size) comprising the steps of:

predicting if the option will be needed (col. 1, line 64-col. 2, line 3; receiver establishes communication with transmitter and determines that a new window size is needed);

if the option is predicted to be needed, predicting if the option will need a value outside of a normal range of values (col. 5, lines 41-45, Abbassi disclosed determining

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that the window size should be increased from a predetermined size used by the transmitter), wherein values outside a normal range of values include a largest value and a major value, with the major value being a value that is greater than values that a majority of applications use (col. 6, lines 5-11, Abassi disclosed using the entire range of TCP window sizes possible):

if the option is predicted to need the value outside of the normal range of values:

determining an outside setting that is outside of the normal range of values to provide the option with the outside setting (col. 5, lines 40-45, Abassi disclosed increasing the window size; col. 6, lines 5-11, Using the entire range possible for TCP, which must include values outside a normal range of values);

if the outside setting comprises a value greater than or equal to one of the largest value and the major value, providing the option with the value greater than or equal to one of the largest value and the major value (col. 6, lines 5-11, Using the entire range possible for TCP, which must include values outside a normal range of values); and

if the option is not predicted to need the value outside of the normal range of values, setting a value needed by the option to a normal setting within the normal range of values (col. 5, lines 35-45, lines 56-57, Abassi disclosed determining whether the segment size should be increased or decreased; col. 6, lines 5-11, Abassi disclosed using the entire range possible for TCP, therefore a

change in the window size could be within out outside the normal range,
depending on what the normal range is)

if the option is predicted not to be needed, setting the computer setting to a
default value (col. 2, lines 53-55, Abassi disclosed using a predetermined segment size,
therefore, if not specified, the predetermined size is used).

19. Claims 5-7, 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by
Liu et al. (U.S. 7,131,008).

20. Before a detailed mapping, a discussion of the prior art is provided to clarify
Examiner's interpretations.

Liu disclosed a mechanism for dynamically constructing customized
implementations to enforce restrictions on services provided to an application, in which
upon a request for an encryption service (col. 6, lines 5-6), the system determines that
an option is needed based on this request, for example, a type of encryption algorithm
such as Blowfish (col. 6, lines 10-11). The system also determines what settings to use
based on factors such as:

- a) a set of limitations to use for a particular encryption service, the set of
limitations including, for example, a default set, or an exempt set (col. 9, lines 21-30;
see also Fig. 5)
- b) specific parameters requested by the applications (col. 8, lines 18-30) and
- c) permissions, if any, granted to the calling application (col. 10, lines 10-12).

For example, If the system specifies parameters, if these parameters are within the restriction, then they are used. If the system determines that the application does not have any permissions, a default set of parameters is used (col. 11, lines 44-48). If the system determines that the application has a specific permission, for example "key recovery" (col. 13, lines 31-34), then the system determines if the permission can be applied to the requested type of algorithm and if so, it uses the exempt set rather than the default set (col. 13, lines 40-45). As shown in Fig. 5, "the entries in the exempt set typically allow stronger cryptographic parameters to be used than the default set" (col. 13, lines 53-55).

21. Regarding claims 5 and 14, Liu disclosed a method (col. 1, lines 63-65, "mechanism") and computer readable medium (FIG. 11 is a hardware block diagram of a computer system in which the present invention may be implemented) to negotiate an option for a computer setting in a computer environment comprising the steps of:

predicting if the option will be needed (col. 6, lines 5-20; Liu disclosed the application determines a particular encryption service to request and the framework determines implementations from the request);

if the option is predicted to be needed, predicting if the option will need a value outside of a normal range of values (col. 13, lines 40-45, 53-55, Liu disclosed the system determining whether to use the exempt set or the default set, with the default settings being of normal range, i.e. "default", and the exempt settings including stronger parameters), wherein values outside a normal range of values include a largest value

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and a major value, with the major value being a value that is greater than values that a majority of applications use (Fig. 5, under exempt set, MAX KEY SIZE 256 BITS, col. 9, lines 35-42, "other limitations such as number of encryption rounds; As noted above, the exempt settings are larger than default):

if the option is predicted to need the value outside of the normal range of values (col. 13, lines 40-45, if a permission can be applied):

determining an outside setting that is outside of the normal range of values to provide the option with the outside setting (col. 13, lines 40-45; Fig. 5, determine that the exempt set should be used, thereby determining the higher MAX KEY SIZE that is associated with the exempt set);

if the outside setting comprises a value greater than or equal to one of the largest value and the major value, providing the option with the value greater than or equal to one of the largest value and the major value (col. 13, lines 40-45; Fig. 5, after determining to use the exempt set, actually using it); and

if the option is not predicted to need the value outside of the normal range of values: setting a value needed by the option to a normal setting within the normal range of values (col. 8, lines 14-24, Liu disclosed the application can provide specific parameters to be used; lines 25-30, and the parameters are used, since the application specifies the parameters, they can be within the normal range); and

if the option is predicted not to be needed, setting the computer setting to a default value (col. 11, lines 44-49, if no permissions are valid, use the default set).

22. Regarding claims 6 and 15, Liu disclosed the limitations described in claim 5, including wherein the option is an Internet security encryption option, and wherein the step of setting the value needed by the option to a normal setting includes setting an encryption key size to one of 40 bit, 128 bit, 192 bit, and 256 bit (Fig. 5, default set max key size: 128 bits, OR exempt set max key size: 256 bits).

23. Regarding claims 7 and 16, Liu disclosed the limitations described in claim 6, including wherein the step of setting an encryption bit size to the one of 40 bit, 128 bit, 192 bit, and 256 bit includes the steps of predicting a highest value that will be needed and setting the encryption key size to the highest value (col. 13, lines 40-45, Liu disclosed that once it is determined which limitation set is to be used based on permissions, the determined set provides for using the "max key size", which is provided within each set as shown in Fig. 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of Swander et al. (U.S. 2004/0243853).

25. Regarding claims 8 and 17, Liu disclosed the limitations described in claim 6.

Liu did not explicitly state using the disclosed methods with regards to any specific protocols.

This would have motivated one of ordinary skill in the art to search the prior art for well known security protocols that use encryption.

In an analogous art, Swander disclosed a system and method for improved network security in which a policy module is included to generate and associate a security association, wherein the policy module is configured via Internet Protocol Security (IPSEC), in which multiple phases of negotiated exchanges occur between network systems to establish a trust between systems, to determine encryption methods to be employed, and to establish keys for encrypting and decrypting the information (Swander, Abstract and [0004] and [0007]).

Liu provides mechanisms for dynamically constructing service implementations to enforce restrictions such as encryption algorithms. Swander shows that IPsec is a standard protocol for security that uses encryption. One of ordinary skill in the art would have been motivated to use the IPsec protocol with the mechanism of Liu since it is a standard encryption protocol over an network.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate an encryption protocol standard such as IPSec into the teachings of Liu to enable separation of user and service network traffic in order to improve security between multiple users on a single system and between multiple services running a server (Swander, [0025]).

26. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abassi in view of Olariu et al. (U.S. 7,133,361).

27. As per claim 9 and 18, Abassi disclosed the limitations as described in claims 5 and 14. Abassi also disclosed wherein the option is a TCP window size in which the size can range throughout those recognized by the TCP protocol (col. 6, lines 5-10).

Abassi did not explicitly state wherein the option is a window-scaling factor.

Olariu disclosed a method and system for improvement of network performance over asymmetric links in which the sender and receiver exchange a TCP window scale factor at connection establishment in order to use "large windows" (col. 5, lines 25-40).

Olariu incorporates by reference, RFC1323. As defined in RFC 1323 – TCP Extensions for High Performance, the Window scaling factor is a well-known TCP option that expands the definition of the TCP window to 32 bits and then uses a scale factor to carry this 32-bit value in the 16-bit Window field of the TCP header. RFC 1323 also shows that the window scaling factor is a TCP option which is negotiated at connection establishment (pages 7-8).

Therefore, Olariu shows that the TCP window scale factor is a well-known option used for the same purpose of the window size option, which is sizing the window size, the only difference being for use with "large windows".

Therefore, since window scaling factors are well known options provided through the TCP protocol, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the system of Abassi to use window scaling factors in order to expand the capabilities of its TCP protocol to 32 bits, allowing a larger window size, thus increasing throughput, thereby allowing the receiver, after determining that a "sufficient number of data segments were received," to increase its window size in order to use "large windows" in order "to use the maximum window size" (Olariu, col. 5, lines 54-55).

Olariu did not explicitly state setting the window scaling factor to any specific size, let alone 256.

However, the number 256 is a 32-bit entry. Therefore it would have been obvious to use 256 as the value of the window-scaling factor since the window-scaling factor is used to expand the capabilities of its TCP protocol to 32 bits, for the benefit of achieving the "maximum window size" (Olariu, col. 5, lines 54-55) while still receiving a "sufficient number of data segments" (Abassi, col. 5, lines 25-30).

Response to Amendment

Applicant's arguments with respect to claims 5-9 and 14-18 have been considered but are moot in view of the new ground(s) of rejection.

It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Berry et al. (U.S. 7,023,876) provides a point-to-point protocol that allows negotiation of computer settings such as exchange rate.

Riley (U.S. 6,871,248) provides negotiation of a window size between devices

Dillon et al. (U.S. 6,473,793) provides negotiation of bandwidth between devices

Klassen et al. (U.S. 6,711,137) provides tuning of a communications network that calculates changes of network factors such as bandwidth.

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571) 272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Dennison', with a long horizontal flourish extending to the right.

J. Bret Dennison
Patent Examiner
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